

## ABSTRACT OF THE DISCLOSURE:

The present invention concerns an apparatus for detecting the phase and amplitude of electromagnetic waves, comprising at least two modulations photogates which are sensitive to the electromagnetic waves, and accumulating gates which are associated with the modulation photogates and which are not photosensitive, and electrical connections for the modulation photogates and the accumulation gates so that the latter can be connected to a reading-out device and the former can be connected to a modulating device which increases and reduces the potential of the modulation photogates relative to each other and relative to the preferably constant potential of the accumulation gates corresponding to a desired modulation function. It is proposed in accordance with the invention that a plurality of modulation photogates and accumulation gates are provided in the form of long narrow parallel strips which group-wise form a PMD-pixel.